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Project Approval Form

Project Title: [redacted]	**Project Number:** CD02154
Date Prepared: 10/24/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SMART SWITCHES PROGRAM
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**Capital Investment part of original Op Plan:** Yes
Project Manager: [redacted]	**Emergency Related Request?** No
Project Sponsor: [redacted]	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Required in service date: 12/31/2024	
Total Capital Request: 227K	**Authorization Type:** Full Funding

1. Executive Summary

Full funding is being requested for this project at a cost of 227K which is 88% of the initial funding estimate of 257K. There is no scope change for this project.

This project is being established to address a [redacted]

[redacted]

Location Information:

Division: Western
District: Stamford
City: Greenwich

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2024	Year 2025	Year 2026+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	5.8	0.0	0.0	5.8
Outside Services	36.3	0.0	0.0	36.3
Materials	97.0	0.0	0.0	97.0
Removals	3.6	0.0	0.0	3.6
Risk and Contingency	15.8	0.0	0.0	15.8
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**158.6**	**0.0**	**0.0**	**158.6**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	68.3	0.0	0.0	68.3
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	**68.3**	**0.0**	**0.0**	**68.3**
Total Gross Capital Costs	**227.0**	**0.0**	**0.0**	**227.0**
Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**227.0**	**0.0**	**0.0**	**227.0**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

The Smart Switch Program is a continuation of an initiative that was approved as part of the System Resiliency PURA Docket 12-07-06RE01 which is a multi-year program to improve circuit reliability by adding

automatic sectionalizing devices on overhead distribution circuits. The Smart Switch Program focuses on breaking up customer zones and lowering the average number of customers impacted by a backbone interruption.

[redacted]

b. Project Need

This project has been established to address the following issue on the [redacted]

- [redacted]

c. Project Scope

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Major Material:

- 3 Viper Reclosers and controls
- 9 In-line switches

4. Alternatives Considered

Project is a compliance obligation - no alternatives considered - no financial benefit

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	December 2022
Fully Funded Approval	October 2023
100% Detailed Engineering Completion	May 2024
Construction Start	September 2024
In Service Date	December 2024

6. Regulatory Decisions

N/A

7. Codes and Standards

N/A

8. Risk and Contingencies

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	Low	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Customer Permission / Siting Council / Municipal approvals	2024	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2024	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2024	High	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2024	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2024	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

9. References

N/A

10. Attachments (One Line Diagrams, Images, etc.)

Attachment	Included in Submittal?
A. Cost Summary	*YES*
B. One-line	*YES*
C. Geographic Map	*YES*
D. Load Sheet	*YES*
E. Partial Funded PAF	*YES*

Attachment A: Cost Summary:

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	28.00%
SubTotal:	$203,494
Contingency Amount:	$56,978
Estimate:	$260,473
Reimbursement:	$0
Net Amount:	**$260,473**
Description:	

Item Description	CU	[redacted]	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$7,000.00
SECTIONALIZE OH - Recloser - 3ph	16-OH38		43,968.80
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$7,019.20
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph In line switches	16-OH43		30,849.60
SECTIONALIZE OH - Recloser Control - setting changes only Pole 70951 [redacted]	16-OH39A		14,656.80

CD02154_project_needs_statement.pdf

Attachment B: One-line:

CD02154 – Smart Switch [redacted] Project – Existing One-Line



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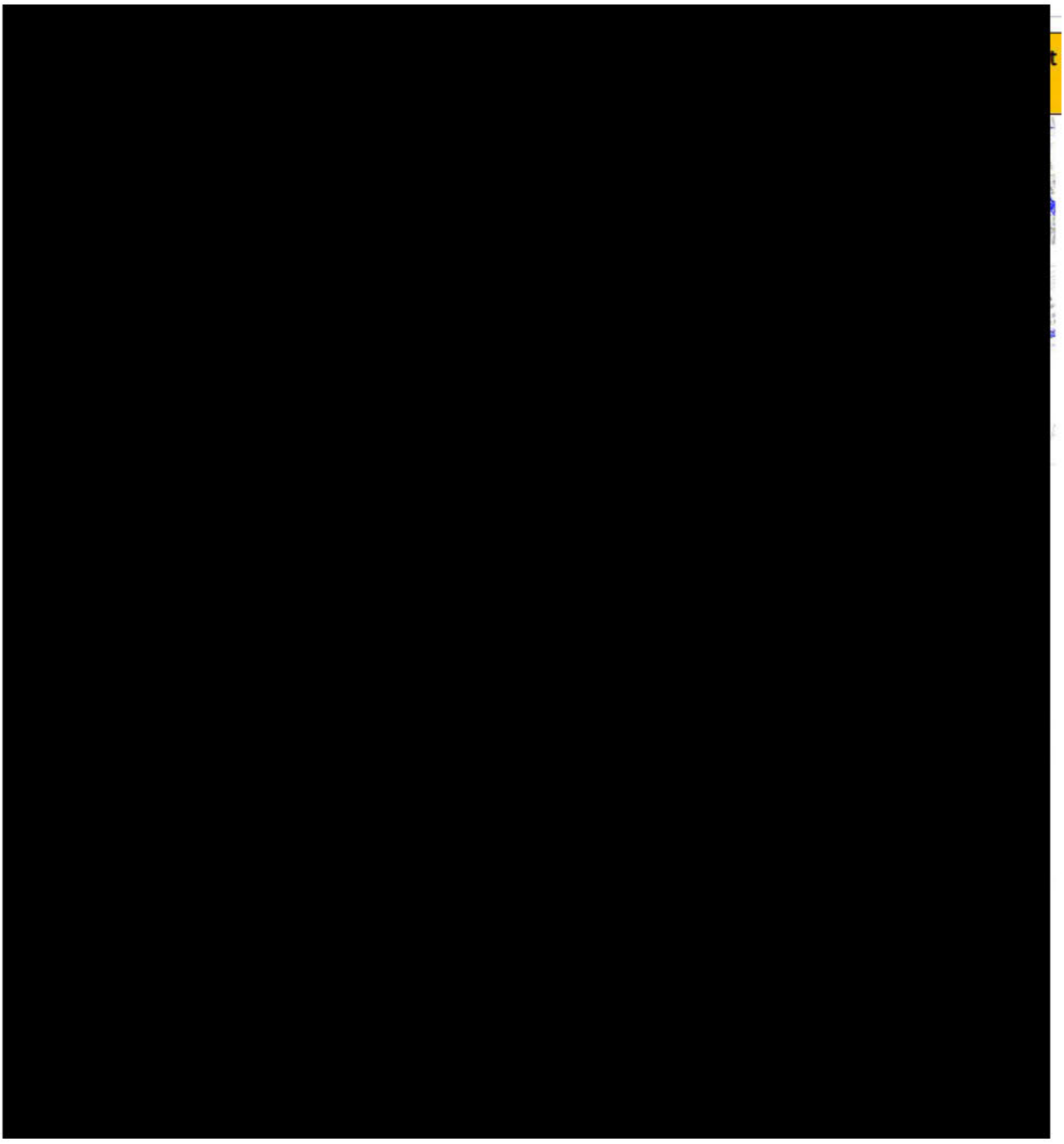
CD02154 – Smart Switch [redacted] Project – After CD02154

[redacted]

CD02154 OneLine For Smart Switch Project.p

Attachment C: Geographic Map:



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CD02154 –Smart Switch [redacted] Project
After – $260,473
After Map



CD02154 [redacted] Geo map.pdf

Attachment D: Load Sheet:

[redacted]

[redacted] - Load Sheet.xlsx

Attachment E: Partial Funded PAF:

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Operations Project Authorization Form

Project Title: [redacted]	**Project Number: CD02154**
Date Prepared: 12/19/2022	**Company:** Eversource CT
Organization: Distribution Engineering	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** SMART SWITCHES PROGRAM
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** Yes
Estimated in service date: 12/31/2024	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? No	**Facility Type** (check all that apply)**:**
Total Gross Capital Request: $257K	**Authorization Type:** Initial Funding

Executive Summary

This project is being established to address a [redacted]. The total cost of this project is $257K.

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Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	Year 2024	Year 2025	Year 2026+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$19	$0	$0	$19
Outside Services	$58	$0	$0	$58
Materials	$61	$0	$0	$61
Removals	$16	$0	$0	$16
Risk and Contingency	$2	$0	$0	$2
Other	$0	$0	$0	$0
Subtotal – Direct Costs	**$157**	**$0**	**$0**	**$157**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$94	$0	$0	$94
Capitalized interest or AFUDC, if any	$5	$0	$0	$5
Subtotal – Indirect Costs	**$100**	**$0**	**$0**	**$100**
Total Gross Capital Costs	**$257**	**$0**	**$0**	**$257**
Customer Contribution	**$0**	**$0**	**$0**	**$0**
Total Net Capital Project Costs	**$257**	**$0**	**$0**	**$257**

Technical Justification:

Project Need Statement

This project has been established to address the following issue on the [redacted]

- [redacted]

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Project Objectives

The goal of the Smart Switch program is to reduce the number of customers exposed to an outage event. The project breaks up large customer zones by creating automated loops and adding sectionalizing reclosers in various settings profiles to isolate outages. The target of the project is to decrease customer zone to below 500.

Project Scope:

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Major Material:

- 3 Nova Reclosers
- 9 In-line switches

Background:

The Smart Switch Program is a continuation of an initiative that was approved as part of the System Resiliency PURA Docket 12-07-06RE01 which is a multiyear program to improve circuit reliability by adding automatic sectionalizing devices on overhead distribution circuits. The Smart Switch Program focuses on breaking up customer zones and lowering the average number of customers impacted by a backbone interruption.

The following is the outage history for [redacted] (2018 to 2022)

[redacted]

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[redacted]

Business Process and / or Technical Improvements:

Projects within the Smart Switch Program will increase the number of SCADA controlled devices on the system. This upgrade allows for better system visibility, faster restoration, outage isolation and reconfiguration of the system during planned and unplanned switching events. Customer zones are reduced to under 500, where possible (ref. DSEM 02.301).

Alternatives Considered:

Project is a compliance obligation - no alternatives considered - no financial benefit

Regulatory Approvals:

Are Regulatory body approvals needed for the project?

No

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	May 2024
Construction Start	September 2024
Testing/Commissioning	November 2024
In Service Date	December 2024

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	Low	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Customer Permission / Siting Council / Municipal approvals	2024	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2024	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2024	High	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2024	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2024	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

References

CD02154_project_needs_statement.pdf

28F8- Load Sheet.xlsx

Appendices (One-Line Diagrams, Images, etc.)

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CD02154 OneLine For Smart Switch Project.p


CD02154 28F8 Geo map.pdf


Outage history of [redacted]xlsx